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A Spectrum Management Perspective on Cell Phone Signal Boosters

By Thomas Kidd - July-September 2013

Recent changes in Federal Communications Commission (FCC) regulations governing signal boosters enable the sale of certain types of these boosters within the United States. Signal boosters are devices that can improve cell phone coverage in areas where they do not get a good signal. The FCC's new rules create two classes of signal boosters — consumer and industrial — each with distinct regulatory requirements. The Department of the Navy can benefit from these changes provided spectrum-dependent programs follow DON spectrum guidance when using these boosters.

Federal use of the radio frequency spectrum within the United States and its possessions (US&P) is authorized by the Assistant Secretary of Commerce for Communications and Information and regulated by the Department of Commerce National Telecommunications and Information Administration (NTIA). Federal agency spectrum regulations are contained in the NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management).

In response to the FCC changes, the NTIA updated Section 7.23 of the NTIA Manual, "Federal Government Agencies as End Users of FCC Licensed Commercial Services," to allow federal agency use of both industrial and consumer signal boosters. However, federal operation of end user radio devices is under the control of the FCC licensee, and federal use must be in accordance with FCC rules governing the specified service.

Section 7.23 of the NTIA Manual states: "Federal Government entities may, without further authority from the Assistant Secretary of Commerce for Communications and Information, operate radio devices as end users in commercial FCC-licensed systems in the services listed below. Operation of end user radio devices is under the control of the FCC licensee, and Federal use must be in accordance with FCC rules governing the specified service. This section does not relieve Federal users from any other policy requirements and it is the responsibility of the Federal user to determine if its operations are eligible to operate under the FCC license or under the FCC rules."

The list of devices referenced in Section 7.23 includes consumer and industrial signal boosters. NTIA also addresses the use of subscriber-based services. The entire NTIA Manual is available at: http://www.ntia.doc.gov/files/ntia/publications/redbook/2012-05/Manual_2012.pdf. Chapter 7 can be downloaded at: http://www.ntia.doc.gov/files/ntia/publications/redbook/2012-05/7_12.pdf.

Navy and Marine Corps organizations considering using signal boosters are reminded that FCC regulations only apply within the US&P. Operations outside the US&P are regulated by host-nation agreements that may not permit their use. Also, using signal boosters aboard naval ships, aircrafts and installations requires special consideration for electromagnetic environmental effects.

Other requirements, such as the completion of a spectrum supportability risk assessment (<http://www.doncio.navy.mil/ContentView.aspx?id=4321>) and registering technical parameters in the Equipment Location-Certification Information Database (<http://www.ntia.doc.gov/el-cid-support-center>) may also apply.

The electromagnetic spectrum is a dynamic environment. Before purchasing any radio frequency spectrum-dependent device, DON personnel are reminded to consult with local spectrum management or the Navy Marine Corps Spectrum Center at navyspectrum.fct@navy.mil.

Tom Kidd is the strategic spectrum policy lead for the DON Chief Information Officer. He was named "Agency Vice Chairman" of the Interdepartment Radio Advisory Committee (IRAC) April 23, 2013.

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